

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A gain-clamped optical amplifier comprising:
~~only one~~ optical reflection means, ~~the optical reflection means~~ installed on an input optical fiber;

optical anti-reflection means installed on an output optical fiber opposite to the input optical fiber having the optical reflection means installed on; and

~~an optical amplifier comprising an input connected to the input optical fiber and an output connected to the output optical fiber, the optical amplifier configured to amplify~~
~~located between the optical reflection means and the optical anti-reflection means, for~~
~~amplifying an input signal and an optical reflection signal reflected by the optical reflection~~
~~means;~~

wherein an amplified spontaneous emission light emitted from the ~~input of the~~ optical amplifier ~~to the~~~~into the~~ input optical fiber is reflected by the optical reflection means installed in the input optical fiber and ~~is~~ amplified in the optical amplifier;

wherein the spontaneous emission light inputted to the input optical fiber and reflected by the optical reflection means is in a same direction as the input optical signal; and

wherein a change in the input signal is compensated by the amplified spontaneous emission light such that a gain is clamped ~~regardless of a power level of the input signal.~~

2. (Original) The gain-clamped optical amplifier of claim 1, wherein the optical reflection means is one or more optical fiber Bragg gratings installed on the input optical fiber or the output optical fiber.

3. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical reflection means is one or more waveguide type Bragg gratings directly engraved on an input optical waveguide or an output optical waveguide of the optical amplifier.

4. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical reflection means is comprised of a wavelength division multiplexer and a mirror installed at an end of the wavelength division multiplexer.

5. (Original) The gain-clamped optical amplifier of claim 1, wherein the optical anti-reflection means is an isolator.

6. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical anti-reflection means uses an optical fiber having a section of the output optical fiber coated for anti-reflection.

7. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical anti-reflection means uses an optical fiber having a core section of the output optical fiber cut slantly.

8. (Original) The gain-clamped optical amplifier of claim 1, wherein the optical amplifier is a semiconductor-optical amplifier.

9. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical amplifier is an erbium-doped optical fiber amplifier.

10. (Withdrawn) The gain-clamped optical amplifier of claim 1, wherein the optical amplifier is a rare earth ion doped optical fiber amplifier optically pumped.

11-17. (Canceled).